Mathematische Zeitschrift

Vol. 221 · 1996

Edited by
E. Becker, Dortmund
G. Carlsson, Stanford
K. Diederich, Wuppertal
J. C. Jantzen, Aarhus
H. Knörrer, Zürich
J. Pöschel, Stuttgart
D.W. Stroock, Cambridge, Mass.
M. Struwe, Zürich

Advisory Board
W.P. Barth, Erlangen · G. Faltings, Bonn
H. Heyer, Tübingen · K.H. Hofmann, Darmstadt
J. Jost, Bochum · W. Klingenberg, Bonn
H.H. Schaefer, Tübingen · L. Smith, Göttingen
W.v. Wahl, Bayreuth · E. Zehnder, Zürich

Springer

"Mathematische Zeitschrift" was founded in 1918 and edited by *L. Lichtenstein* in cooperation with *K. Knopp, E. Schmidt* and *I. Schur;* after Lichtenstein's death, 1933, it was edited by *K. Knopp*. The Editorial Committee was increased to include *E. Kamke* and *F.K. Schmidt* in 1933, *R. Nevanlinna* in 1936 and *H. Wielandt* in 1950. The latter became Managing Editor in 1952. He was succeeded in 1973 by *H. Salzmann*, 1977 by *H. Heyer* and 1984 by *W.P. Barth* and *W. v. Wahl*. As of 1990 *E. Becker* is the Managing Editor.

Die **„Mathematische Zeitschrift"** wurde im Jahre 1918 von *L. Lichtenstein* unter der Mitwirkung von *K. Knopp, E. Schmidt* und *I. Schur* gegründet und herausgegeben. Nach dem Tode Lichtensteins übernahm *K. Knopp* 1933 die Herausgabe. Die Schriftleitung ergänzte sich 1933 durch *E. Kamke* und *F.K. Schmidt*, 1936 durch *R. Nevanlinna* und 1950 durch *H. Wielandt*, der 1952 die Herausgabe übernahm. 1973 ging die Federführung an *H. Salzmann*, 1977 an *H. Heyer* und 1984 an *W.P. Barth* und *W. v. Wahl* über. Seit 1990 ist *E. Becker* geschäftsführender Herausgeber.

Manuscripts may be sent to/Manuskripte nehmen entgegen:

E. Becker, FB Mathematik, Universität Dortmund, Postfach 50 05 00, D-44221 Dortmund, Germany
G. Carlsson, Department of Mathematics, Stanford University, Stanford, CA 94305, USA
K. Diederich, Universität-GHS, Fachbereich 7, Mathematik, Gaußstrasse 20, D-42097 Wuppertal, Germany
J. C. Jantzen, Mathematik Institut, Aarhus Universitet, DK-8000 Aarhus C, Denmark
H. Knörrer, Departement Mathematik, ETH-Zentrum, Rämisstrasse 101, CH-8092 Zürich, Switzerland
J. Pöschel, Mathematisches Institut A, Pfaffenwaldring 57, D-70569 Stuttgart, Germany
D. W. Stroock, Department of Mathematics, MIT, Rm-272, Cambridge, MA 02139-4307, USA
M. Struwe, Departement Mathematik, ETH-Zentrum, Rämistrasse 101, CH-8092 Zürich, Switzerland

Copyright

Submission of a manuscript implies: that the work described has not been published before (except in the form of an abstract or as part of a published lecture, review, or thesis); that it is not under consideration for publication elsewhere; that its publication has been approved by all coauthors, if any, as well as by the responsible authorities at the institute where the work has been carried out; that, if and when the manuscript is accepted for publication, the authors agree to automatic transfer of the copyright to the publisher (society); and that the manuscript will not be published elsewhere in any language without the consent of the copyright holders.

All articles published in this journal are protected by copyright, which covers the exclusive rights to reproduce and distribute the article (e.g., as offprints), as well as all translation rights. No material published in this journal may be reproduced photographically or stored on microfilm, in electronic data bases, video disks, etc., without first obtaining written permission from the publisher.

The use of general descriptive names, trade names, trademarks, etc., in this publication, even if not specifically identified, does not imply that these names are not protected by the relevant laws and regulations.

While the advice and information in this journal is believed to be true and accurate at the date of its going to press, neither the authors, the editors, nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Special regulations for photocopies in the USA: Photocopies may be made for personal or in-house use beyond the limitations stipulated under Section 107 or 108 of U.S. Copyright Law, provided a fee is paid. All fees should be paid to the Copyright Clearance Center, Inc., 21 Congress Street, Salem, MA 01970, USA, stating the ISSN 0025-5874, the volume, and the first and last page numbers of each article copied. The copyright owner's consent does not include copying for general distribution, promotion, new works, or resale. In these cases, specific written permission must first be obtained from the publisher.

The Canada Institute for Scientific and Technical Information (CISTI) provides a comprehensive, world-wide document delivery service for all Springer-Verlag journals. For more information, or to place an order for an copyright-cleared Springer-Verlag document, please contact Client Assistant, Document Delivery, Canada Institute for Scientific and Technical Information, Ottawa K1A OS2, Canada (Tel: 613-993-9251; FAX: 613-952-8243; e-mail: cisti.docdel@nrc.ca).

Printers: Saladruck, Berlin, Germany
© Springer-Verlag, Berlin Heidelberg 1996
Springer-Verlag, GmbH & Co. KG, D-14197 Berlin, Germany
Printed in Germany

Inhalt/Contents

Alama, S., Tarantello, G.: On the solvability of a semilinear elliptic equation via an associated eigenvalue problem 467

Alexandru, V., Popescu, A., Popescu, N.: Completion of r.t. extensions of local fields (I) 675

Baker, R. C., Harman, G.: Small remainder of a vector to suitable modulus 59

Baker, R. C., Harman, G.: Primes of the form $[c^P]$ 73

Ballester-Bolinches, A.,Pérez-Ramos, M. D.: On a question of Chambers and Makan 169

Barkatou, M.-Y.: Régularité höldérienne du $\bar{\partial}_b$ dans les hypersurfaces 1-convexes-concaves 549

Beatty, T. A., Schaefer, H. H.: Semi-bornological spaces 337

Berens, H., Xu, Y.: Fejér means for multivariate Fourier series 449

Berndtsson, B.: $\bar{\partial}$ and Schrödinger operators 401

Brown, K. A., Lorenz, M.: Grothendieck groups of invariant rings: linear actions of finite groups 113

Bugiel, P.: Approximation for the invariant measures of Markov maps in R^d 139

Choi, M. D., Lam, T. Y., Prestel, A., Reznick, B.: Sums of $2m$-th powers of rational functions in one variable over real closed fields 93

Cox, B., Futorny, V., Melville, D.: Categories of nonstandard highest weight modules for affine Lie algebras 193

Dąbrowski, A.: On Poincaré series on Sp_m 573

del Angel R., P. L.: Hodge type of subvarieties of compact hermitian symmetric spaces 261

Duzaar, F., Grotowski, J. F.: A mixed boundary value problem for energy minimizing harmonic maps 153

Edmunds, D. E., Ilyin, A. A.: Approximation numbers of embeddings of Sobolev spaces 177

Futorny, V. → Cox, B. et al.

Geck, M., Hiss, G., Malle, G.: Towards a classification of the irreducible representations in non-describing characteristic of a finite group of Lie type 353

Grotowski, J. F. → Duzaar, F.

Harman, G. → Baker, R. C.

Hill, T. P.: Correction to "Prophet inequalities for averages of independent non-negative random variables" 175

Hiss, G. → Geck, M. et al.

Huebschmann, J.: The singularities of Yang-Mills connections for bundles on a surface. II. The stratification 83

Huebschmann, J.: Poisson geometry of flat connections for SU(2)-bundles on surfaces 243

Hwang, J.-M.: Characterization of the complex projective space by holomorphic vector fields 513

Ilyin, A. A. → Edmunds, D. E.

Kelly-Lyth, D., McCrudden, M.: Supports of Gauss measures on semisimple Lie groups 633

Kirsch, W.: Wegner estimates and Anderson localization for alloy-type potentials 507

Kuwert, E.: Harmonic maps between flat surfaces with conical singularities 421

Lam, T. Y. → Choi, M. D. et al.

Lei, F.: A general handle addition theorem 211

Loday, J.-L.: Künneth-style formula for the homology of Leibniz algebras 41

Lorenz, M. → Brown, K. A.

Malle, G. → Geck, M. et al.

Maruyama, Ken-ichi: Finitely presented subgroups of the self-homotopy equivalences group 537

McCrudden, M. → Kelly-Lyth, D.

Melville, D. → Cox, B. et al.

Mihalache, N.: Special neighbourhoods of subsets in complex spaces 49

Monsky, P.: Generalizing the Birch-Stephens theorem I. Modular curves 415

Müller, D., Ricci, F., Stein, E. M.: Marcinkiewicz multipliers and multi-parameter structure on Heisenberg (-type) groups, II 267

Oguiso, K.: On certain rigid fibered Calabi-Yau threefolds 437

Pérez-Ramos, M. D. → Ballester-Bolinches, A.
Popescu, A. → Alexandru, V. et al.
Popescu, N. → Alexandru, V. et al.
Prestel, A. → Choi, M. D. et al.

Reimer, M.: A short proof of a result of Kogbetliantz on the positivity of certain Cesàro means 189
Reznick, B. → Choi, M. D. et al.
Ricci, F. → Müller, D. et al.
Robbin, J., Salamon, D.: Feynman path integrals on phase space and the metaplectic representation 307
Runde, V.: Intertwining operators over $L^1(G)$ for $G \in [PG] \cap [SIN]$ 495

Salamon, D. → Robbin, J.
Salvati Manni, R.: On the differential of applications defined on moduli spaces of p.p.a.v. with level theta structure 231
Schaefer, H. H. → Beatty, T. A.
Schaflitzel, R.: Subfactors and group representations 521
Smith, S. B.: Rational evaluation subgroups 387
Stein, E. M. → Müller, D. et al.
Sun, Z.: On a quasilinear inverse boundary value problem 293

Tarantello, G. → Alama, S.
Thắńg, N. Q.: Some local-global principles in the arithmetic of algebraic groups over real function fields 1
Thilliez, V.: Régularité Gevrey au sens de Beurling ou Roumieu pour l'opérateur $\bar{\partial}$ dans des ouverts non bornés 21
Tonegawa, Y.: Existence an regularity of constant mean curvature hypersurfaces in hyperbolic space 591
Triebel, H., Winkelvoß, H.: Intrinsic atomic characterizations of function spaces on domains 647

Vâjâitu, V.: q-completeness and q-concavity of the union of open subspaces 217
van Geemen, B.: Theta functions and cycles on some abelian fourfolds 617

Winkelvoß, H. → Triebel, H.

Xu, Y. → Berens, H.

Comprehensively covered by
Zentralblatt für Mathematik,
Mathematical Reviews and
Current Contents